

Appl. No. 09/863,528
 Amdt. dated Friday, April 02, 2004
 Reply to Notice of February 3, 2004

Amendments to the Specification:

Please replace paragraph [0068] with the following amended paragraph:

[0068] Some of the DNA motifs plus their core consensus sequences and basic properties that are preferred for use in the present invention are summarized in TABLE 1 and described briefly below.

TABLE 1. Some DNA motifs that respond to environmental pollutants. Several properties of the pollution-inducible response elements are listed. Extended flanking sequences, which may be necessary for maximal response, are highly variable and not shown. As indicated, some genes can be induced by several response elements due to the complexity of their 5' flanking sequences or the oxidative properties of the inducing pollutant. Within each consensus sequence N = A, T, G, or C; R = A or G; W = A or T.

Response element	Consensus sequence 5'-3'	Activating agents	Transcription factors	Normal genes up-regulated
AHRE	TWGCGTG <u>(SEQ ID NO:1)</u>	Dibenzo-p-dioxins, Dibenzofurans, Planar polychlorinated biphenyls and polycyclic aromatic hydrocarbons	AH receptor + ARNT heterodimer	Cytochromes P450 1 (CYP1A, 1B), Quinone oxidoreductase, Glutathione transferase, UDP glucuronosyl-transferases
EPR	RTGACNNNGC <u>(SEQ ID NO:1)</u>	Planar aromatic hydrocarbons, Potent electrophiles (heavy metals, arsenicals, diphenols, quinones, azo dyes)	NF-E2-related factor 1 (?), NF-E2-related factor 2 (?), Small Maf (?), ARE-BP (?)	Heme oxygenase, Glutamate-cysteine ligase, Quinone oxidoreductase, Glutathione transferase, UDP glucuronosyl-transferase
MRE	TGCRCNCGG <u>(SEQ ID NO:1)</u>	Heavy metals	MTF-1	Metallothioneins, Glutamate-cysteine ligase
ERE	GGTCANNNTGAC C <u>(SEQ ID NO:1)</u>	Estrogen, Pharmaceuticals, Pesticides, Chlorinated aromatic hydrocarbons, Phytoestrogens	Estrogen receptor homodimer	Estrogen-responsive finger protein, Vitellogenin, Glucose-6-phosphatase, Lactoferrin
RARE	RGGTCA(N ₀₋₈) RGGTCA <u>(SEQ ID NO:1)</u>	Retinoic acid and other retinoids natural and pharmaceutical	Retinoic acid receptor homodimers, heterodimers with Retinoid X receptor	<i>Hoxal</i> , Retinoic acid receptor, Cellular retinoic acid binding protein II, Fetoprotein
RXRE	GGGGTCAAAGG TCAGGGGTATG GGGTCA <u>(SEQ ID NO:1)</u>	Retinoic acid and other retinoids natural and pharmaceutical	Retinoid X receptor homodimers	Apolipoprotein A1